

Integrated Wavefront Corrector, Phase II

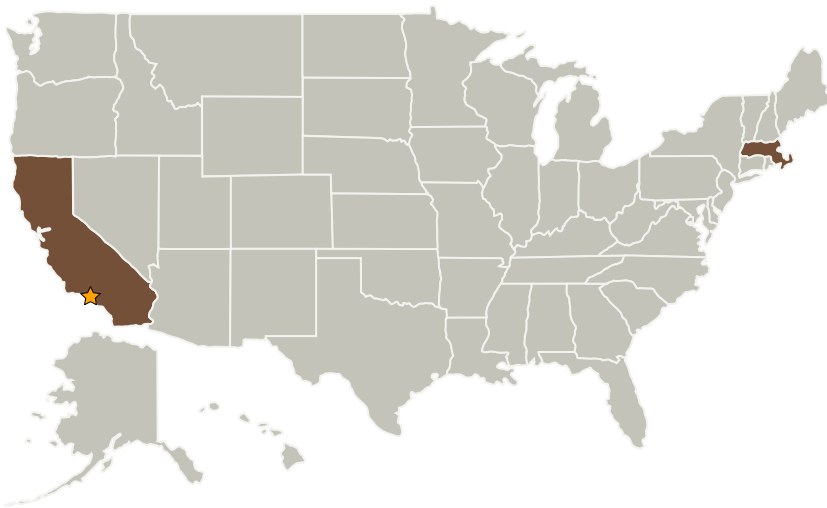
Completed Technology Project (2006 - 2008)



Project Introduction

One of the critical issues for NASA missions requiring high contrast astrophysical imaging such as Terrestrial Planet Finder (TPF) is wavefront control. Without use of appropriate adaptive optics technology, it is impossible to obtain high quality imaging. Normal adaptive optics systems utilize a series of discreet components to satisfy the correction requirements. These consist of tip/tilt mirror and deformable mirrors. Xinetics has engaged in developing series of deformable mirrors and integrated adaptive optical components that will improve the optical quality of traditional wavefront control systems while simultaneously reducing system volume, weight and cost. Our innovative integrated wavefront corrector will combine new types of deformable mirror, Photonex Meniscus, with tip/tilt stage with Xinetics co-fired ceramic actuators. The proposed effort is the result of a strategic vision to develop small robust wavefront corrector designed to be employed in space based optical systems.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Jet Propulsion Laboratory(JPL)	Lead Organization	NASA Center	Pasadena, California
Xinetics, Inc.	Supporting Organization	Industry	Devens, Massachusetts



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Jet Propulsion Laboratory (JPL)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

California

Massachusetts

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.2 Observatories
 - └ TX08.2.1 Mirror Systems